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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,685	12/02/2003	Takeshi Nakano	008312-0306986	1970

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EXAMINER

HALEY, JOSEPH R

ART UNIT PAPER NUMBER

2627

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/724,685

Applicant(s)

NAKANO ET AL.

Examiner

Joseph Haley

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The Japanese Office Action filed of 1/4/05 has been considered but has been lined through so as to not be printed on the front of the patent.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Ijima et al. (US 6597642).

In regard to claim 5, Ijima et al. teaches a photodetector which comprises two or more photodetection cells, receives a reflected light from a disk, and outputs a photodetection signal based on the received reflected light (fig. 4); a first tracking error signal generator which detects a phase difference between the photodetection signals from the photodetector, and generates from the photodetection signal a first tracking error signal corresponding to the phase difference (fig. 1 element 30); a second tracking error signal generator which detects a level difference between the photodetection signals from the photodetector, and generates from the photodetection signal a second tracking error signal corresponding to the level difference (fig. 1

element 29); a selector CPU which selectively outputs one of the first and second tracking error signals, according to the largeness of the first and second tracking error signals (fig. 1 element 301); and a tracking control unit which controls tracking by using the tracking error signal selected by the selector (fig. 1 element 302).

In regard to claims 6 and 7, Ijima et al. teaches the selector comprises section which when the amplitude of one of the first and second tracking error signals is lower than a predetermined reference, selects the other tracking error signal (column 8 lines 50-55).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ijima et al. (US 6597642) in view of Akiyama (US 4344165).

In regard to claim 1, Ijima et al. teaches a disk apparatus which reproduces information by irradiating an optical beam to a disk, the disk apparatus comprising: a photodetector which comprises two or more photodetection cells (fig. 4), receives a reflected light from a disk, and outputs a photodetection signal based on the received reflected light; a first tracking error signal generator which detects a phase difference between the photodetection signals from the photodetector, and generates a first

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tracking error signal corresponding to the phase difference (fig. 1 element 30); a first amplifier which amplifies the first tracking error signal (see fig. 11); a second tracking error signal generator which detects a level difference between the photodetection signals from the photodetector, and generates from the photodetection signal a second tracking error signal corresponding to the level difference (fig. 1 element 29); a second amplifier which amplifies the second tracking error signal (fig. 10); a combining unit which combines the first and second tracking error signals generated by the first and second amplifiers, and provides a combined tracking error signal (fig. 1 element 301); a muting unit CPU which mutes one of the first and second tracking error signals by using the first and second amplifiers (fig. 1 element 302, Ijima uses a switch to cut off the signal of two of the amplifiers), according to the largeness of the first and second tracking error signals; and a tracking control unit which controls tracking by using the tracking error signal combined by the combining unit (fig. 1 element 301); however, does not teach wherein the amplifiers are variable.

Akiyama teaches a variable amplifier (fig. 3 element 18).

The two are analogous art because they both deal with the same field of invention of tracking in optical disc systems.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Ijima with the variable amplifier of Akiyama. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Ijima with the variable amplifier of Akiyama because the output could then be controlled to a specific level according to the specifications of certain parts.

In regard to claims 2 and 3, Ijima et al. teaches wherein the muting unit comprises section which mutes the first tracking error signal when the first tracking error signal amplitude is lower than a predetermined reference; and section mutes the second tracking error signal when the second tracking error signal amplitude is lower than a predetermined reference (column 8 lines 50-55).

In regard to claim 4, Ijima et al. teaches the muting unit comprises section which compares the amplitudes of the first and second tracking error signals, and mutes the tracking error signal with a smaller amplitude (fig. 1 element 301).


Method claim 8 is drawn to the method of using the corresponding apparatus claimed in claim 1. Therefore method claim 8 corresponds to apparatus claim 1 and is rejected for the same reasons of obviousness as used above.

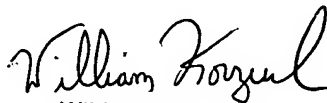
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Haley whose telephone number is 571-272-0574. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jrh 

  
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